



HP L2401x and x2401 LED Backlit Monitors

User Guide

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About This Guide

This guide provides information on setting up the monitor, installing the VESA adapter plate, contacting HP support, and technical specifications.

 **WARNING!** Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.

 **CAUTION:** Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

 **NOTE:** Text set off in this manner provides important supplemental information.

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1 Product Features

HP LED Backlit Monitors

Figure 1-1 HP L2401x/x2401 Monitors



The monitors have an active matrix, thin-film transistor (TFT) panel. The monitor models and features include:

- L2401x/x2401 models, 60.96-cm (24-inch) diagonal viewable area display with 1920 x 1080 resolution
- Non-glare panel with an LED backlight that consumes less energy than traditional CCFL backlights
- Wide viewing angle to allow viewing from a seated, standing, or off-center position
- Tilt capability
- Video signal input to support DisplayPort (cable provided with select models) and HDMI (cable provided with select models) with HDCP copy protection
- Plug-and-play capability if supported by the operating system
- Software and documentation CD that includes monitor drivers and product documentation
- HP Display Assistant for adjusting monitor settings and enabling theft-deterrence feature
- Energy-saver feature to meet requirements for reduced power consumption
- Certifications and regulatory notices for these products are available in the *HP LCD Monitors Reference Guide* (provided on the CD included with the monitor)
- 100 mm VESA adapter plate
- On-Screen Display (OSD) adjustments in several languages for easy setup and screen optimization

2 Setting Up the Monitor

To set up the monitor, ensure that the power is turned off to the monitor, computer system, and other attached devices, and then follow the instructions below.

Extending the Monitor Stand

1. Lift the monitor from its box and place it face down on a flat surface.
2. Grasp the stand and pull upward until fully extended.

⚠ CAUTION: Do not touch the surface of the panel. Pressure on the panel may cause permanent non-uniformity of color or disorientation of the liquid crystals.

Figure 2-1 Extending the monitor stand



3. Place the monitor in an upright position on a flat surface so that the feet are touching the surface. Press down firmly on the top center area of the monitor to ensure that the monitor is stable.

Side connectors

Figure 2-2 Side connectors



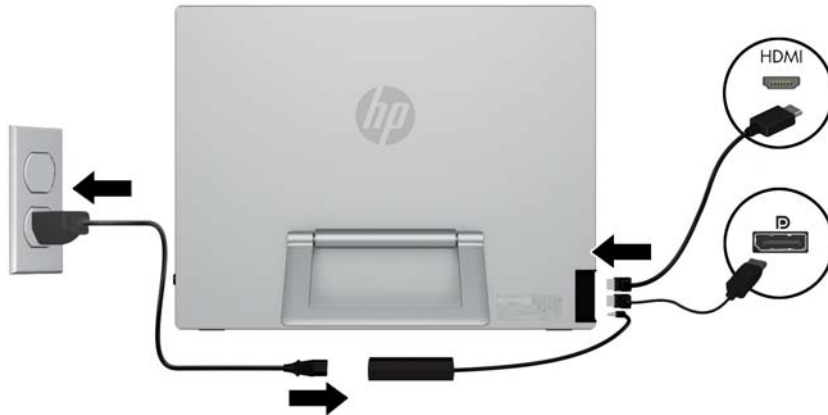
Table 2-1 Side connectors

Connector	Function
1 DisplayPort	Connects the DisplayPort video cable (provided with select models) from the computer to the monitor
2 HDMI	Connects the HDMI video cable (provided with select models) from the computer to the monitor
3 DC Power Jack	Connects the external power adapter to the monitor

Connecting the Cables

1. Place the monitor in a convenient, well-ventilated location near the computer.

Figure 2-3 Connecting the monitor



2. Connect one end of the DisplayPort signal cable (provided with select models) to the DisplayPort connector on the side of the monitor and the other end to the DisplayPort connector on the computer.
3. Connect one end of the HDMI signal cable (provided with select models) to the HDMI connector on the side of the monitor and the other end to the HDMI connector on the computer.
4. Connect the power adapter cord to the power connector on the side of the monitor. Connect one end of the power cord to the power supply brick and the other end to an electrical wall outlet.

⚠ WARNING! To reduce the risk of electric shock or damage to the equipment:

Do not disable the power cord grounding plug. The grounding plug is an important safety feature.

Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.

Disconnect power from the equipment by unplugging the power cord from the electrical outlet.

For your safety, do not place anything on power cords or cables. Arrange them so that no one may accidentally step on or trip over them. Do not pull on a cord or cable. When unplugging from the electrical outlet, grasp the cord by the plug.

Front Panel Controls

Figure 2-4 Monitor front panel controls

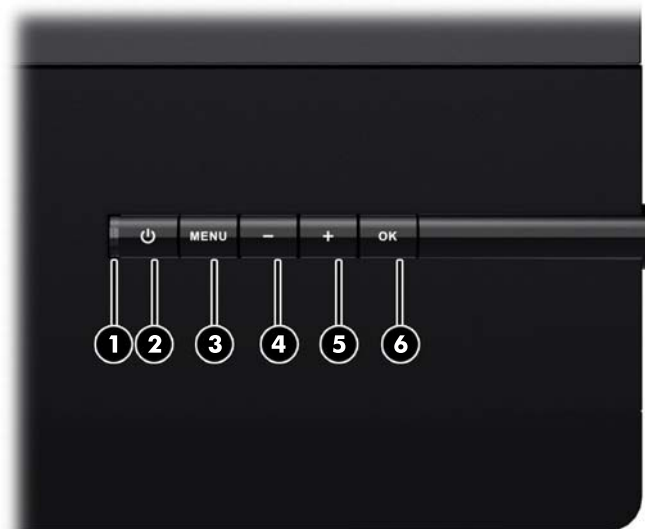








Table 2-2 Monitor front panel controls

Control		Function
1	Power LED	Blue = Fully powered. Amber = Sleep mode. Off = Off mode.
2	 Power	Turns the monitor on or off.
3	 Menu	Opens, selects or exits the OSD menu.
4	 Minus	Moves the OSD cursor down/decreases the OSD adjustment level.
5	 Plus	Moves the OSD cursor up/increases the OSD adjustment level.
6	 OK	If the OSD menu is on, press to select the highlighted menu item.

 **NOTE:** To view an OSD menu simulator, visit the HP Customer Self-Repair Services Media Library at <http://www.hp.com/go/sml>.

Adjusting the Tilt

Tilt the monitor's panel to set it to a comfortable eye level.

Figure 2-5 Tilting the monitor



VESA Adapter Plate

The monitor includes a VESA 100 mm x 100 mm (3.9 in x 3.9 in) adapter plate. This can be used to attach the monitor panel to a VESA-compatible device (purchased separately), such as a stand, swing arm, or other mounting fixture.

What You Need

- A Phillips screwdriver and a flathead screwdriver (magnetic-tipped recommended)
- A stable flat surface covered with a soft, clean cloth (such as a clean, large towel) to protect the monitor when you place it face down
- Another person (it might require two people to lift and move the monitor)
- Antistatic wrist strap and a conductive foam pad to stand on while attaching the VESA adapter plate (recommended)
- VESA device (sold separately) with the following specifications:
 - VESA standard 100 mm x 100 mm (3.9 in x 3.9 in) hole pattern
 - Provides at least 58 mm (2.28 inches) space behind the monitor for the monitor power cord and cables

Safety Information

This product has not been evaluated for connection to an "IT" power system (an AC distribution system with no direct connection to the earth, according to IEC 60950).

⚠ WARNING! Always disconnect the monitor from the power source before lifting, moving, or removing the stand from your monitor. Failure to do so can result in personal injury or equipment damage.

Removing the Stand from the Monitor

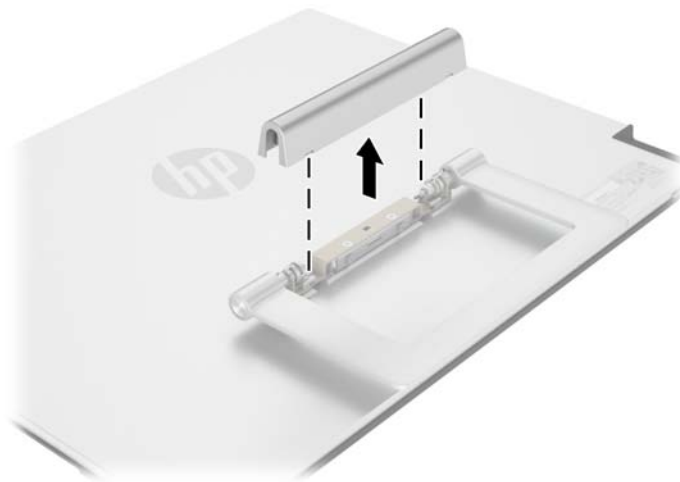
To avoid injury and equipment damage, always complete the following steps in order:

1. Turn the monitor off and disconnect the power cord from the wall outlet.

⚠ CAUTION: Static electricity can damage the electronic components of the monitor or other equipment. Ensure that you are discharged of static electricity by briefly touching a grounded metal object.

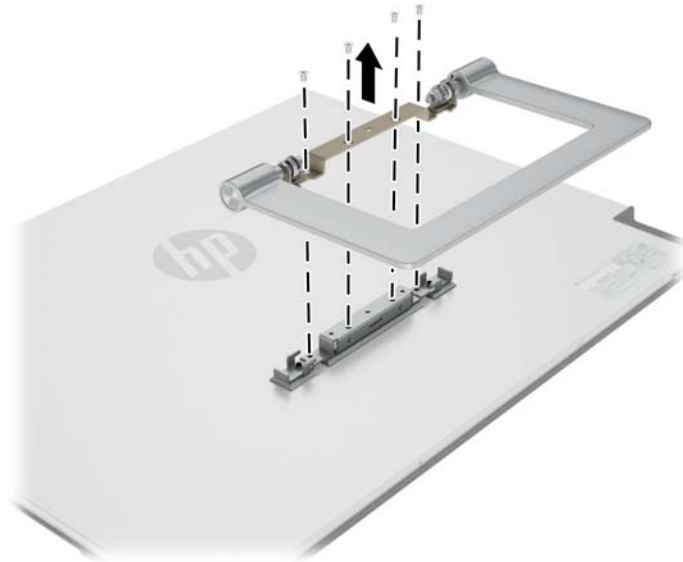
2. Disconnect any equipment and all attached cables from the monitor before beginning this procedure.
3. Lay the monitor face down on a flat surface covered by a clean, dry cloth.
4. Remove the detachable hinge cover.

Figure 2-6 Removing the detachable hinge cover




5. Remove the four screws from the monitor stand.

Figure 2-7 Removing the screws from the monitor stand



Save the monitor stand and the four screws, in the event that you decide to convert your monitor back to a desktop monitor in the future.

Installing the VESA Adapter Plate onto the Monitor

 **NOTE:** This apparatus is intended to be supported by a UL or CSA Listed wall-mount bracket.

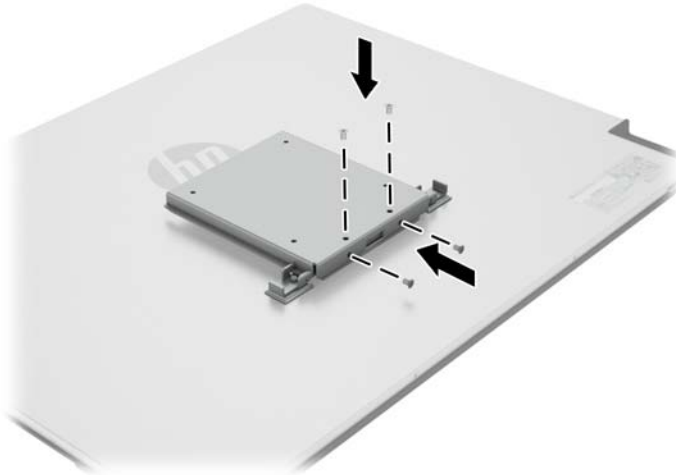
1. Remove the stand from the monitor panel. Refer to [Removing the Stand from the Monitor on page 7](#).
2. Install the VESA adapter plate that shipped with the monitor.
 - a. With the monitor face down on the table, slide the VESA adapter plate from the lower edge of the monitor toward the bracket hinge until the VESA adapter plate is in position over the bracket hinge.

Figure 2-8 Positioning the VESA adapter plate



- b. Secure the lower edge of the VESA adapter plate to the bracket hinge with four screws.

Figure 2-9 Securing the VESA adapter plate



3. To attach the monitor to a VESA-compatible device (purchased separately), follow the instructions included with that device to ensure that the monitor is safely attached.

CAUTION: This monitor supports the VESA industry-standard 100 mm mounting holes. To attach a third-party solution to the monitor, four 4 mm, 0.7 pitch, and 10 mm long screws (purchased separately) are required. Longer screws must not be used because they may damage the monitor. It is important to verify that the manufacturer's solution is compliant with the VESA standard and is rated to support the weight of the monitor display panel. For best performance, it is important to use the power and video cables provided with the monitor.

4. Reconnect the cables to the monitor panel.

Removing the VESA Adapter Plate

To avoid injury and equipment damage, always complete the following steps in order:

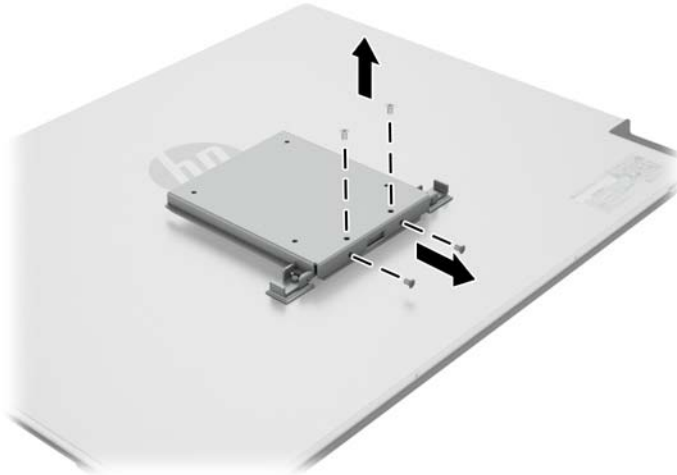
1. Turn the monitor off and disconnect the power cord from the wall outlet.

CAUTION: Static electricity can damage the electronic components of the monitor or other equipment. Ensure that you are discharged of static electricity by briefly touching a grounded metal object.

2. Disconnect any equipment and all attached cables from the monitor before beginning this procedure.
3. To remove the monitor from a mounting device, follow the instructions included with that device to safely detach the monitor and remove any mounting hardware.

4. Remove the four screws securing the lower edge of the VESA adapter plate to the bracket hinge.

Figure 2-10 Removing the screws securing the VESA adapter plate



5. Slide the VESA adapter plate toward the lower edge of the monitor and off the bracket hinge.

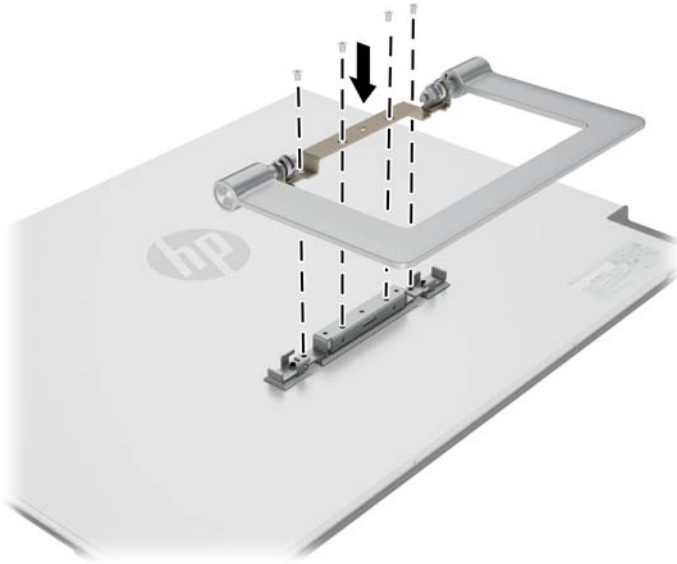
Figure 2-11 Removing the VESA adapter plate



Replacing the Stand

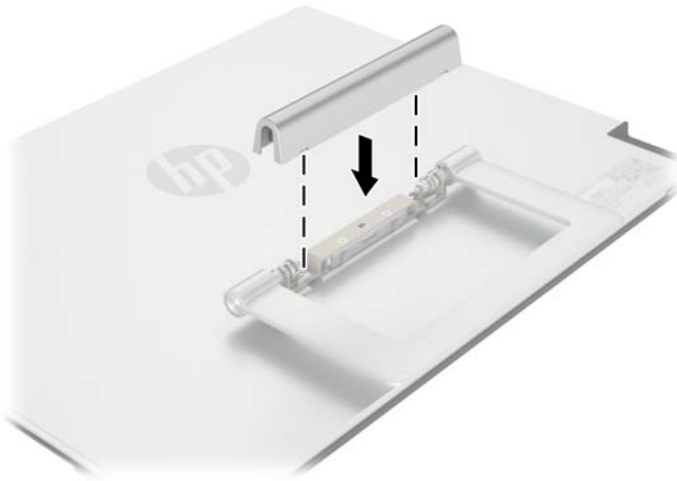
1. Align the monitor stand over the bracket hinge and secure it with the four screws.

Figure 2-12 Securing the monitor stand



2. Attach the hinge cover.

Figure 2-13 Attaching the stand hinge cover



Turning on the Monitor

1. Press the power button on the front of the monitor to turn it on.
2. Press the power button on the computer to turn it on.

⚠ CAUTION: Burn-in image damage may occur on monitors that display the same static image on the screen for a prolonged period of time (12 or more consecutive hours of non-use). To avoid burn-in image damage on the monitor screen, you should always activate a screen saver application or turn off the monitor when it is not in use for a prolonged period of time. Image retention is a condition that may occur on all LCD screens. Monitors with a burned-in image are not covered under the HP warranty.

When the monitor is powered on, the power LED on the front of the monitor is blue.

Locating the Rating Label

The rating label on the monitor provides the spare part number, product number, and serial number. You may need these numbers when contacting HP about the monitor model. The rating label is located on the rear panel of the monitor.

Figure 2-14 Locating the rating labels



3 Finding More Information


Refer to the *HP LCD Monitors Reference Guide* included on the CD with your monitor for additional information on:

- Optimizing monitor performance
- Safety and maintenance guidelines
- Installing software from the CD
- Using the OSD menu
- Downloading software from the Web
- Agency regulatory information
- Troubleshooting and recommended solutions to common problems

For information on theft deterrence, refer to the *HP Display Assistant User Guide* included on the CD that shipped with your monitor.

Product Support


For additional information on using and adjusting your monitor, go to <http://www.hp.com/support>. Select your country or region, select **Product Support & Troubleshooting**, and then enter your monitor model in the SEARCH window.

 **NOTE:** The monitor user guide, reference guide, and drivers are available at <http://www.hp.com/support>.

If the information provided in the guide or in the *HP LCD Monitors Reference Guide* does not address your questions, you can contact support. For U.S. support, go to <http://www.hp.com/go/contactHP>. For worldwide support, go to http://welcome.hp.com/country/us/en/wwcontact_us.html.


Here you can:

- Chat online with an HP technician

 **NOTE:** When support chat is not available in a particular language, it is available in English.

- E-mail support
- Find support telephone numbers
- Locate an HP service center

A Technical Specifications

 **NOTE:** All specifications represent the typical specifications provided by HP component manufacturers; actual performance may vary either higher or lower.

L2401x/x2401 Models

Table A-1 L2401x/x2401 Specifications

Display	60.96 cm	24 in
Type	MVA (Multi-domain Vertical Alignment)	
Viewable Image Size	60.96 cm diagonal	24 in diagonal
Tilt	10° to 35°	
Maximum Weight (Unpacked)	3.3 kg	7.32 lbs
Dimensions:		
Height	43.13 cm	16.98 inches
Width	56.69 cm	22.32 inches
Depth	13.09 cm	5.15 inches
Graphic Resolution:		
Native Mode	1920 x 1080	
Safe Mode	640 x 480	
Dot Pitch	0.277 (H) x 0.277 (W) mm	
Pixels Per Inch	91.79 PPI	
Horizontal Frequency	24 to 94 kHz	
Vertical Refresh Rate	50 to 76 Hz	
Environmental Requirements Temperature:		
Operating Temperature	5 to 35° C	41 to 95° F
Storage Temperature	-20 to 60° C	-4 to 140° F
Relative Humidity:		
Operating	20% to 80%	
Storage	5% to 95%	
Power Source	100 – 240 VAC 50/60 Hz	

Table A-1 L2401 x/x2401 Specifications (continued)

Altitude:		
Operating	0 to 5,000 m	0 to 16,400 ft
Storage	0 to 12,192 m	0 to 40,000 ft
Measured Power Consumption:		
Full Power	28 W	
Typical Settings	23 W	
Sleep	<0.5 W	
Switch Off	<0.5 W	
Input Terminal	DisplayPort connector (cable included with select models) and HDMI connector (cable included with select models)	

Recognizing Preset Display Resolutions

The display resolutions listed below are the most commonly used modes and are set as factory defaults. This monitor automatically recognizes these preset modes and they will appear properly sized and centered on the screen.

L2401 x/x2401 Model

Table A-2 Factory Preset Modes

Preset	Pixel Format	Horz Freq (kHz)	Vert Freq (Hz)
1	640 × 480	31.469	59.94
2	640 × 480	37.861	72.809
3	720 × 400	31.469	70.087
4	800 × 600	37.879	60.317
5	1024 × 768	48.363	60.004
6	1280 × 720	45.00	59.94
7	1280 × 768	47.396	59.995
8	1280 × 800	49.702	59.81
9	1280 × 960	60.00	60.00
10	1280 × 1024	63.981	60.02
11	1366 × 768	47.712	59.79
12	1600 × 900	60.00	60.00
13	1600 × 1000	61.648	60.00
14	1600 × 1200	75.00	60.00


Table A-2 Factory Preset Modes (continued)

Preset	Pixel Format	Horz Freq (kHz)	Vert Freq (Hz)
15	1680 × 1050	65.29	59.954
16	1920 × 1080	67.50	60.00

Energy-saver Feature

The monitors support a reduced power state. The reduced power state will be entered into if the monitor detects the absence of either the horizontal sync signal and/or the vertical sync signal. Upon detecting the absence of these signals, the monitor screen is blanked, the backlight is turned off, and the power light is turned amber. When the monitor is in the reduced power state, the monitor will utilize 0.5 watts of power. There is a brief warmup period before the monitor will return to its normal operating mode.

Refer to the computer manual for instructions on setting energy-saver features (sometimes called power-management features).

 **NOTE:** The above power-saver feature only works when connected to computers that have energy-saver features.

By selecting the settings in the monitor's Energy Saver utility, you can also program the monitor to enter into the reduced power state at a predetermined time. When the monitor's Energy Saver utility causes the monitor to enter the reduced power state, the power light blinks amber.